INFRARED BEAM DETECTORS

BEAM2-100

BEAM3-250

BEAM4-250

User's Manual

V1.0 06 / 2013

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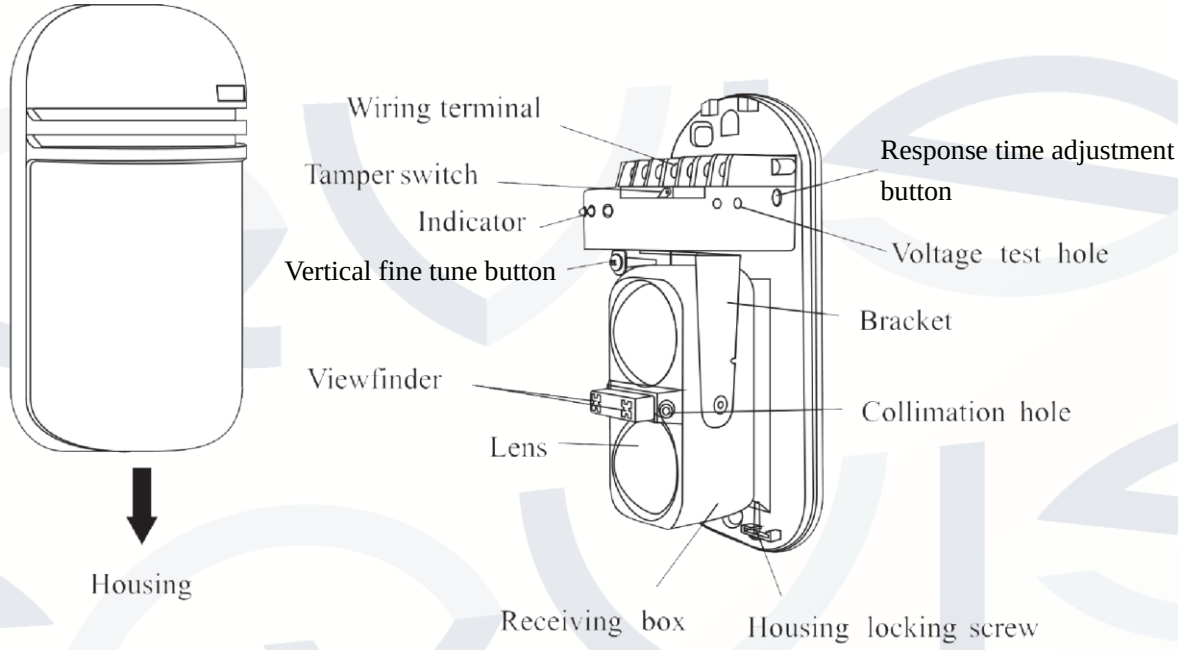
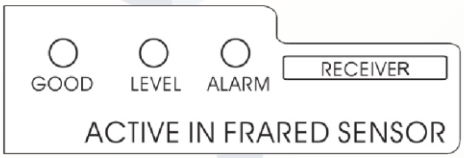
1. PRODUCT DIAGRAM





- POWER: Transmitting indicator

- LEVEL: Light intensity level of the indicator increases as the alignment of the beam becomes more accurate.
- ALARM: The indicator turns on when alarm is triggered.
- GOOD: The green indicator will turn on when the beam aligns with the receiver. If you fail to align the beam, the indicator will turn off.
- **Beam alignment: An alignment sound will emit from the installed sensor, which will signal when the beam has been correctly aimed.**

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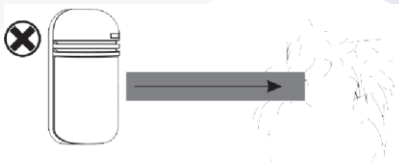
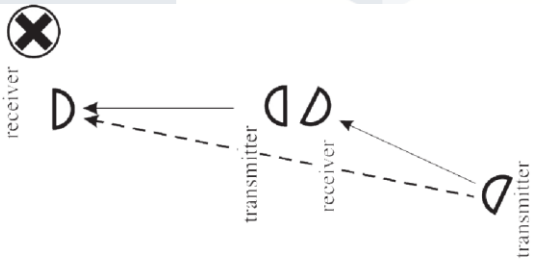
2. INSTALLATION PRECAUTIONS

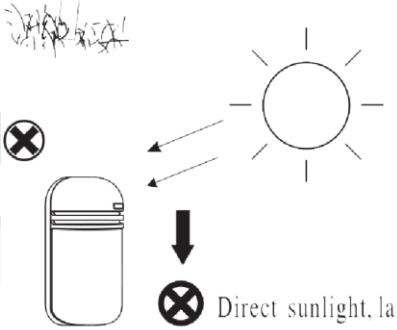


➡ Impediment presents during setup

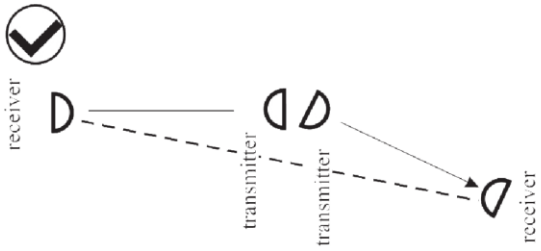


Multi sensors may be used for long-distance guarding. Please install according to the below diagram to avoid interference between beams.

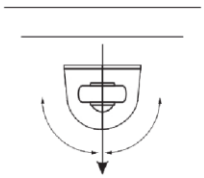
➡ The base is unstable



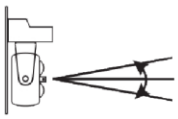
⊗ Direct sunlight, lamplight etc.



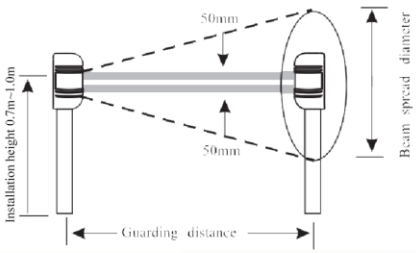
● Adjustable angle: horizontal ±90°
vertical ±10°



Horizontal ±180° (±90°)



Verticaol ±10°



Guarding distance	Beam spread diameter
20m	0.6m
30m	0.7m
40m	1.0m
60m	1.5m
80m	1.8m
100m	2.1m

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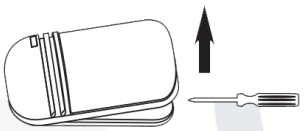
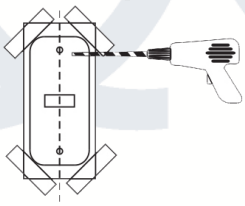
3. BEAM SETUP

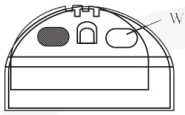
1.Remove the cover



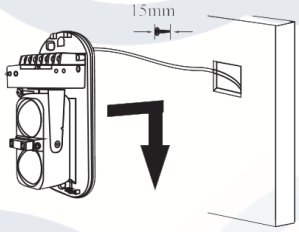
2.Attach the paper stencil onto the location where the equipment is to be mounted, and drill the holes in the positions on its mark.



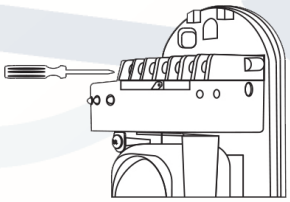
3.Put the cable through the hole for wiring.

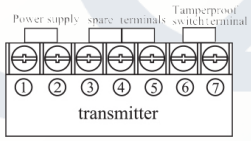


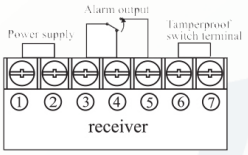
4.Fix the main body onto the wall



5.Connect the cable to the wire terminal.





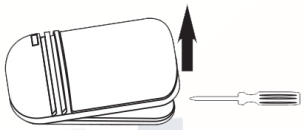


6.Put on the cover after adjusting the response time of the beam.

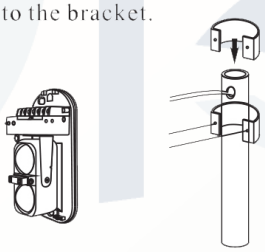
● Installation of fixed bracket

1. Drill a hole on the bracket and pull or thread the cable from it

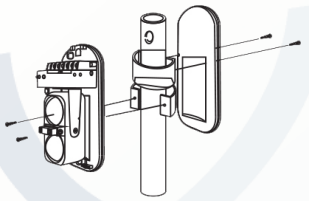
2.Remove the cover.



3.Fasten the base-plate to the bracket.



(Back-to-back installation guiding diagram)



Wiring distance between transmitter and receiver

wire size \ distance / Voltage	DC13.8V	DC24V
0.5mm²(Φ0.8)	300m	300m
0.75mm²(Φ1.0)	400m	800m
1.25mm²(Φ1.2)	700m	1400m
2.0mm²(Φ1.6)	1000m	2000m

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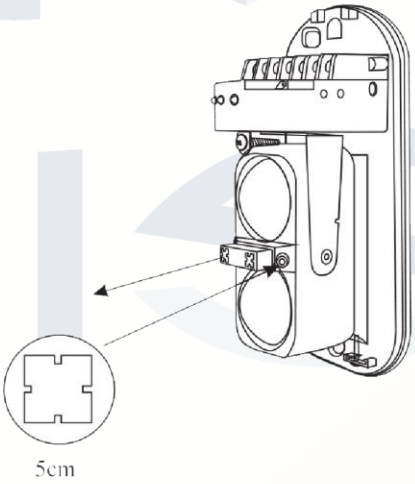
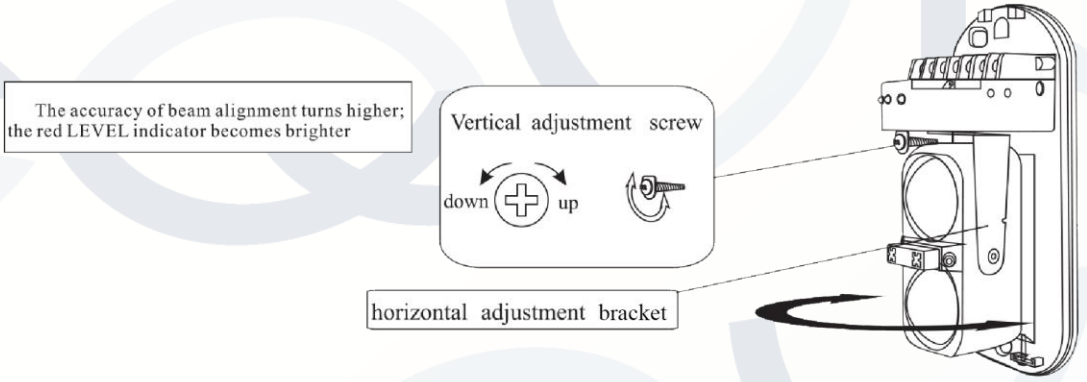
4. BEAM ALIGNMENT

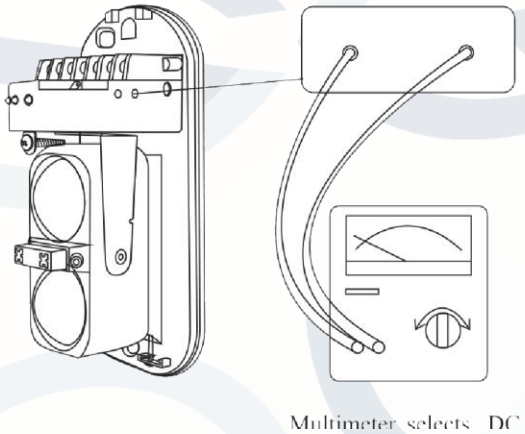
1. Remove the cover and connect power

2. Observe the collimation effect at a distance of 5cm from the view finder.

3. Adjust the vertical and horizontal screws on the viewfinder until the image of the opposite detector falls into the central part of the viewing hole. At this time, the "good" indicator of receiver will light up; if not, adjust and repeat accordingly.




The accuracy of beam alignment turns higher; the red LEVEL indicator becomes brighter
Vertical adjustment screw
down
up
horizontal adjustment bracket



1. Insert the test pen into the test hole (please note the + and – polarity).
2. Secondly adjust horizontal angle until the test hole voltage output maximises. Then adjust the vertical angle via the same way until the voltage reaches the value above that of the diagram below.
3. If it can't reach 1.1 Volts or higher, the transmitter and receiver will need to be regulated again.
4. When the speaker fails to ring, it means that the beam is already on target.

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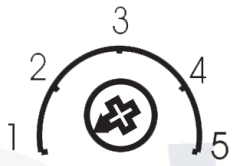
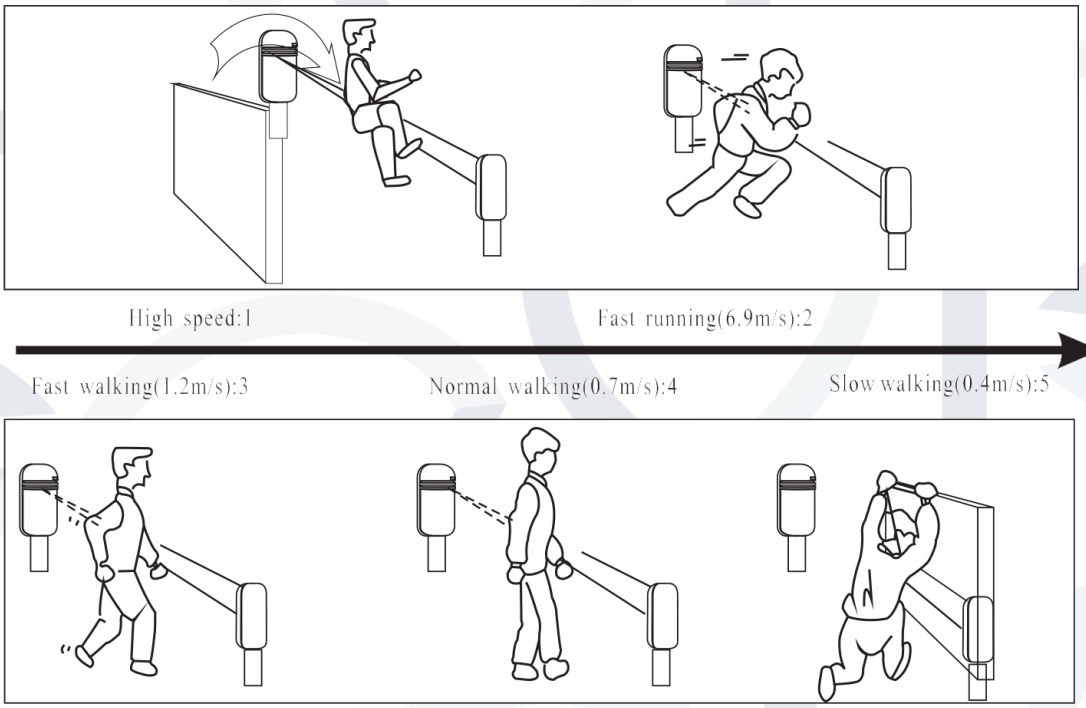
5. BEAM RESPONSE TIME ADJUSTMENT



Please see the diagram to adjust the response time of the receiver.



6. PHYSICAL TEST

Walking test is required after the setting in accordance to below information.

	State	signal
Transmitter	Transmitting	The 2 indicators of green LED light up
Receiver	Guarding	GOOD LEVEL indicators light up
	In alarm	The red ALARM indicator light up

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7. PROBLEM CHECKING

Fault	Cause	Solution
The LED of the transmitter doesn't light up	Power failure (open circuit, short-circuit, etc.)	Check the power wiring
The LED of the receiver doesn't light up	Power failure (open circuit, short-circuit, etc.)	Check the power wiring
The LED of the receiver doesn't light up when the light is blocked	1.By reflecting, or light from other sources enter the receiver 2.Both beams are not blocked at the same time 3.Response time is set too short	1.Remove the reflecting object or change the direction of beam 2.Block both beams at the same time 3.Prolong the response time
The receiver alarm indicator is ON after the beam is blocked, but there is no alarm signal.	1.Broken circuit or short-circuit of the wiring 2.Poor contact	1.Check the wiring and contact 2.Connect the cable
The alarm indicator of the receiver is constantly ON.	1. The beam are not well connected 2. There is obstacle presents between the transmitter and the receiver 3. The cover is dirty	1. Re-adjust the beam 2. Remove the the obstacle 3. Clean the cover
Intermittent alarm signal	1. Improper wiring 2. The supply voltage does not reach 13V or higher 3. The potential obstacle appears to block the beams due to the effect of wind and rain 4. The installation base unstable 5. The beam accuracy is inadequate 6. Beams blocked by other moving objects 7. Response time too short 8. The LED does not light up before the cover	1.Check the wiring 2.Check the supply power 3.Remove the obstacle or change the location 4.Select a site with a stable base 5.Re-adjust the optical axis 6.Ad just the shade time or change the install location 7.Re-ad just the response time 8.Re-ad just the optical axis.and make the signal reception reaches its top.

8. SPECIFICATIONS

Model		20	30	40	60	80	100
Alert distance	Outdoor	20m	30m	40m	60m	80m	100m
	Indoor	60m	90m	120m	180m	240m	300m
No.of beams		2 beams					
Detection mode		2 beams blocked simultaneous					
Optical source		Infrared digital pulse beam					
Response speed		50~700msec					
Alarm output		Relay contact output: NO, consumption: AC/DC 30V 0.5AMax					
Power supply		DC12--24V P 15W					
Power consumption		40mAmax	40mAmax	55mAmax	55mAmax	65mAmax	65mAmax
Operation temperature & humidity		-25℃-55℃ 5%-95%RH(relative humidity)					
Dimensions		Refer to its diagram					
Tamper output		Contact output: consumption DC 24V 0.5A max					
Optical axis adjustment(H)		± 1800(± 900)					
Optical axis adjustment(V)		200(± 100)					
Protection against dew,frost		Calefaction housing					
Material		PC resin					
Net weight		658g(receiver +transmitter)					
Gross weight		1150g					

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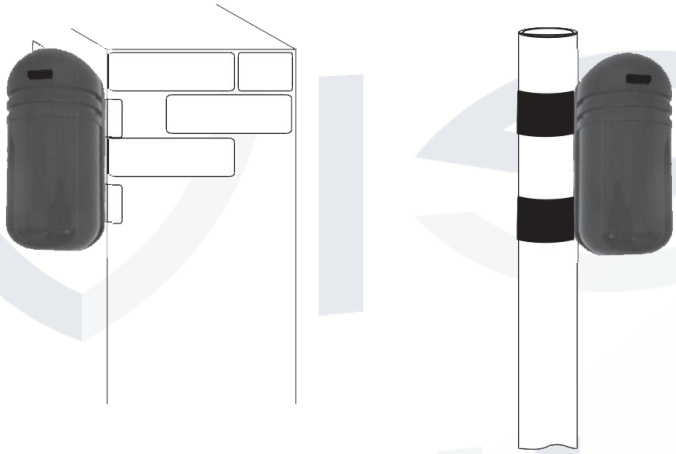
9. EXAMPLE INSTALLATION AND PRODUCT DIMENSIONS

Recommended installation



Installation bracket

T-shaped bracket
T-100
100 × 120mm

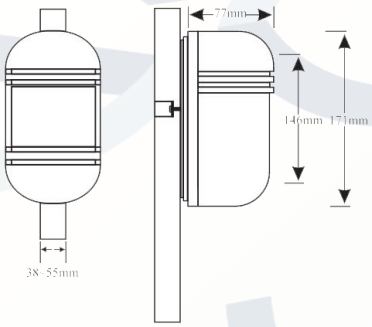
T-200
200 × 120mm

I-shaped bracket
I-100
100mm

I-200
200mm

L-shaped bracket
80 × 75mm

Dimensions



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PRODUCT WARRANTY

1. QVIS LABS warrants that the Product(s) shall be of satisfactory quality within the meaning of the Sale of Goods Act 1979; be reasonably fit for purpose, and; free from defects in materials or workmanship. The period of such warranties shall be as set in the price list that is current at the date of despatch of the Product(s) and the warranty period shall commence on the date of despatch of the Product(s).

2. Any alleged defects in the Product(s) must be notified in writing within 14 days of receipt of the Product(s).

3. In the event of any established breach of warranty, QVIS LABS shall repair or replace in its absolute discretion any defective Product(s). The Buyer shall be liable for the delivery charges incurred in returning the defective Product(s) to QVIS LABS, but shall not be liable for the cost of repair or replacement, or the delivery charge for returning the repaired or replaced Product(s) to the Buyer. If QVIS LABS complies with this clause then it shall have no further liability for breach of the warranty.

4. Repairs undertaken by QVIS LABS under the terms of its warranty are guaranteed for 90 days from the date of dispatch to the Buyer.

5. Where QVIS LABS in its absolute discretion replaces any defective Product(s), the warranty on such replacement Product(s) shall continue in effect for the remainder of the unexpired term of the warranty commencing from the original date of despatch of the defective Product(s). Any replaced Product(s) become the property of QVIS LABS.

6. The warranty shall not cover any defect caused:

a) By fair wear and tear.
b) In whole or in part by the negligence of the Buyer or a User.
c) By improper or unauthorised use of the Product(s) including any attempt to carry out repairs or modifications to the Product(s).
d) By causes external to the Product(s).

7. Failure by the Buyer to settle accounts rendered for Product(s) supplied will render the warranty null & void.

8. If the Buyer adds labels to any of the Product(s) the warranty will be invalidated.

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